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(74) Agents: **HUGHES, E., John, L.** et al.; Davies Collison
Cave, 1 Nicholson Street, Victoria, Melbourne 3000 (AU).

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(71) Applicant (for all designated States except US): **AGT
BIOSCIENCES LIMITED** [AU/AU]; c/- Edmondson
Turner & Co., 439 Bay Street, Brighton, Victoria 3186
(AU).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **COLLIER, Gre-
gory, Royce** [AU/AU]; 22 Kestral Place, Ocean Grove,
Victoria 3226 (AU). **WALDER, Kenneth, Russell**
[AU/AU]; 54 Lake Avenue, Ocean Grove, Victoria 3226
(AU). **BAYLES, Lyndal** [AU/AU]; 36 Victoria Street,
Ripplside, Victoria 3215 (AU).

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(57) Abstract: The present invention relates generally to nucleic acid molecules identified by a pattern of their expression in at least the hypothalamus or skeletal muscle. Conveniently, the nucleic acid molecule are using differential display techniques under differing physiological conditions. The nucleic acid molecules are associated with or act as markers for conditions of inter alia a healthy state, myopathy, obesity, anorexia, weight maintenance, diabetes, disorders associated with mitochondrial dysfunction, genetic disorders, cancer and/or metabolic energy levels. More particularly, the present invention is directed to a nucleic acid molecule and/or its expression product for use in therapeutic and diagnostic protocols for conditions such as inter alia a myopathy, obesity, anorexia, weight maintenance, diabetes, disorders associated with mitochondrial dysfunction, genetic disorders, cancer and energy imbalance. The subject nucleic acid molecule and expression product and their derivatives, homologs, analogs and mimetics are proposed to be useful, therefore, as therapeutic and diagnostic agents for inter alia a myopathy, obesity, anorexia, weight maintenance, diabetes, disorders associated with mitochondrial dysfunction, genetic disorders, cancer and energy imbalance or as targets for the design and/or identification of modulators of their activity and/or function.

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